

Table 3. Comparison of metabolic rates

Strain	μ_{max} , h ⁻¹	Glucose consumption rate		Pyruvate production rate	
		Volumetric,* mmol-liter ⁻¹ ·h ⁻¹	Specific, [†] mmol-liter ⁻¹ ·h ⁻¹ g ⁻¹ dcw	Volumetric,* mmol-liter ⁻¹ ·h ⁻¹	Specific, [†] mmol-liter ⁻¹ ·h ⁻¹ g ⁻¹ dcw
<i>E. coli</i> W3110 (wild type)	0.69	11.9	17.35	nd	nd
TC36 [‡] (<i>focA-pflB frdBC ldhA atpFH adhE sucA</i>)	0.49 ± 0.03	10.1 ± 2.6	17.6 ± 1.5	nd	nd
TC36 [§] (<i>focA-pflB frdBC ldhA atpFH adhE sucA</i>)	0.51 ± 0.01	10.7 ± 0.9	29.7 ± 3.5	3.8 ± 3.0	5.3 ± 3.1
TC38 [§] (<i>focA-pflB frdBC ldhA atpFH adhE sucA ackA</i>)	0.28 ± 0.01	6.7 ± 0.6	16.3 ± 2.2	8.3 ± 0.7	21.1 ± 3.7
TC38 [¶] (<i>focA-pflB frdBC ldhA atpFH adhE sucA ackA</i>)	0.21	6	28	8	28
TC42 [§] (<i>focA-pflB frdBC ldhA atpFH adhE sucA poxB</i>)	0.55	10	17	6	10
TC44 [§] (<i>focA-pflB frdBC ldhA atpFH adhE sucA poxB ackA</i>)	0.34 ± 0.02	9.7 ± 0.7	27.2 ± 4.1	13.1 ± 0.3	40.4 ± 7.4

nd, not determined.

*Standard deviations are included for data from three or more fermentations; others represent an average of two fermentations.

[†]Maximum specific rates per g of dry cell weight (dcw).

[‡]Dissolved oxygen controlled at 5% of air saturation by adjusting the ratio of O₂ and N₂.

[§]Dissolved oxygen allowed to fall from 100% to 5% of air saturation during growth with air sparging; O₂ added to maintain 5% air saturation.

[¶]Dissolved oxygen allowed to fall from 100% to 50% of air saturation during growth with air sparging; O₂ added to maintain 50% air saturation.